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10/574,390	12/19/2006	Mattias Johannesson	088834-000000US	5713

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EXAMINER

NGUYEN, SANG H

ART UNIT

PAPER NUMBER

2886

MAIL DATE

DELIVERY MODE

06/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/574,390

**Applicant(s)**

JOHANNESSON ET AL.

**Examiner**

Sang Nguyen

**Art Unit**

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

Applicant's response to amendment filed on 03/17/08 has been entered. It is noted that the claims 1-16 of the application is pending.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-7 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al (U.S. Patent No. 5,293,538) in view of Mitsuhiro (JP 2003-247952, submitted by applicant).**

**Regarding claims 1, 6-7, 11, and 14-15:** Iwata et al discloses a measuring system, comprises:

an object (5 of figures 1-6) having at least a first (3 of figures 3B or 6) and a second (4, 2 of figures 3B or 6) layer;

at least one light source (70 of figure 6) arranged to illuminate the object (5 of figure 6) with incident light (94 of figure 7), an imaging sensor (e.g., 38, 44 of figure 6 or image sensor 200 of figure 9) arranged to detect reflected light (figures 6-7) from the object (6 of figure 1A) and to convert the detected light into electrical charges and means for creating a representation of the object (6 of figures 6-7) according to the electrical charges (figure 9, 12, and 23A-23B and col.13 lines 28-46); and

means for comparing (BC and 87 of figure 6) the information to stored information in order to detect defects (6, 8, 9 of figure 6) on the object (5 of figure 6).

Iwata et al discloses all of features of claimed invention except for means for obtaining information on light scattered in the first layer and the second layer of the object from the representation. However, Mitsuhiro teaches that it is known in the art to provide means for (see abstract) obtaining information on light scattered in the first layer (4 of figure 4) and the second layer (2 of figures 5-6) of the object from the representation (figures 1-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method and system of Iwata et al with means for obtaining information on light scattered in the first layer and the second layer of the object from the representation as taught by Mitsuhiro for the purpose of detecting accurately defect in the surface with high contrast.

**Regarding claims 2 and 12;** lwata et al discloses the object (5 of figure 22c) is arranged to move in relation to one another in a predefined direction of movement by motor (90, 64 of figure 22c).

**Regarding claim 3;** lwata et al discloses the incident light (94 of figures 7 and 22a) is arranged to have limited dispersion in a predefined direction.

**Regarding claim 4;** lwata et al discloses the incident light (94 of figures 7 and 22a) is a linear light.

**Regarding claims 5 and 13;** lwata et al discloses the system further comprises means for obtaining information on the geometric profile (6-7 and 23a) of the object (5 of figures 6-7 and 23a) from the representation.

**Regarding claim 9;** lwata et al discloses the first layer (3 of figure 6) consist of a transparent or semi-transparent material (col.1 lines 12-22).

**Regarding claim 10;** lwata et al discloses the object (5 of figure 6) is a package wrapped in a protective material. (col.1 lines 15-34).

**Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over lwata et al and Mitsuhiro as applied to claims 1 and 11 above, and further in view of Takeda et al (U.S. Patent No. 5,936,726).**

**Regarding claims 8 and 16;** lwata et al Mitsuhiro discloses all of features of claimed invention except for the light source comprises a polarizer arranged to facilitate the distinction between light reflected on the object and scattered light in the object. However, Takeda et al teaches that it is known in the art to provide the light source (1 of

figure 1) comprises a polarizer (11 of figure 1) arranged to facilitate the distinction between light reflected on the object and scattered light in the object (14 of figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method and system of Iwata et al with the light source comprises a polarizer arranged to facilitate the distinction between light reflected on the object and scattered light in the object as taught by Takeda et al for the purpose of detecting accurately defect in the surface with high contrast.

### ***Response to Arguments***

Applicant's arguments filed 03/17/08 have been fully considered but they are not persuasive. Iwata et al and Mitsuhiro references do not teach or suggest "means for obtaining information on light scattered in the first layer and the second layer of the object from the representation" as recite in claims 1 and 11.

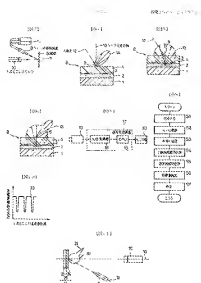
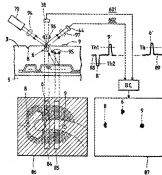
This argument is not persuasive.

In response to applicant's argument that the applicant argues that Iwata et al and Mitsuhiro references do not teach or suggest "means for obtaining information on light scattered in the first layer and the second layer of the object from the representation" as recite in claims 1 and 11. As stated in previous Office action, Iwata et al teaches all of feature of claimed invention such as a defect inspection method and apparatus detect a defect which exists on the surface of a protection layer or a defect which exists in the protection layer and scatters the light on its surface, through the detection of the light which is derived from an illumination light and reflected on the protection layer surface

and the light which is derived from a slit-formed illumination light and scattered in the area between the position where the light is incident to the transparent protection layer and the position where the surface of an element underneath the transparent protection layer is illuminated (see abstract an col.2 lines 60 to col.3 line 29 an see figures 1-7). Also, lwata et al teaches an object (5 of figures 1-6) having at least a first (3 of figures 3B or 6) and a second (4, 2 of figures 3B or 6) layer; at least one light source (70 of figure 6) arranged to illuminate the object (5 of figure 6) with incident light (94 of figure 7), an imaging sensor (e.g., 38, 44 of figure 6 or image sensor 200 of figure 9) arranged to detect reflected light (figures 6-7) from the object (6 of figure 1A) and to convert the detected light into electrical charges and means for creating a representation of the object (6 of figures 6-7) according to the electrical charges (figure 9, 12, and 23A-23B and col.13 lines 28-46); and means for comparing (BC and 87 of figure 6) the information to stored information in order to detect defects (6, 8, 9 of figure 6) on the object (5 of figure 6). lwata et al discloses all of features of claimed invention except for "means for obtaining information on light scattered in the first layer and the second layer of the object from the representation". However, itsuhiro teaches that it is known in the art to provide means for (see abstract) obtaining information on light scattered (105, 29 ; see para. [0004] an 0052]) in the first layer (4 of figure 4) and the second layer (2 of figures 5-6) of the object from the representation (figures 1-19). Thus, the references are considered in combination, the recitation of the claims would have been obvious suggested.

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FIG. 6



In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in



the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

For the reasons set forth above arguments, it is believed that the rejection of the claims 1-16 under 35 U.S.C 103 is proper.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sui et al (6831742); Meeks et al (6956658) Xu et al (6590656); Goto et al (6734960); Ravid et al (6256093) ; Yamanaka et al (5278072); Murakami et al (4886975) ; or Koizumi et al (4460273).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2800 ext. 86. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 10, 2008

/Sang Nguyen/  
Primary Examiner, Art Unit 2886